Monthly Progress Report

REC'D 10-5-94
F.B.

NAME: Ciba Geigy
I.D. NO.: RID001194323
FILE CODE: R-9
OTHER:

Submitted to: Mr. Frank Battaglia, Project Manager
USEPA Region I
Waste Management Building
90 Canal Street
Boston, MA 02114

Submitted by: Ms. Diane Leber, Project Coordinator
CIBA-GEIGY Corporation
444 Sawmill River Road
Ardsley, NY 10502

Pursuant to: RCRA I-88-1088

Facility Site: Cranston, RI

Period Covered: September 1994 (27 August 1994 – 23 September 1994)*

Date Submitted: 10 October 1994

1.0 SUMMARY

This is the fifty-first monthly progress report. Five significant events occurred this month.

Phase II Investigation. Validation and reduction/management of the Phase II data continued.

Project Management. On 9/13/94 a meeting was held with personnel from CIBA-GEIGY, PTRL, HydroQual, and Woodward-Clyde Consultants (WCC) at the WCC Wayne, NJ office to discuss strategies for completing the RFI/CMS investigations.

Stabilization Investigation. Planning for stabilization implementation continued. An application for an Industrial Wastewater Discharge Permit (for the full-scale system) was submitted to the City of Cranston; a copy of the application is in Attachment A.

Hydrological Investigation. Stage height measurements of the river continued. Processing river stage data from the automatic recorders (transducers) continued.

Water Level Monitoring. Monthly groundwater level monitoring continued. Processing groundwater level data from the automatic recorders (transducers) continued.

*As agreed, the reporting period will be monthly through the fourth Friday of the month.

2.0 TASKS AND ACTIVITIES COMPLETED

The sampling and other activities (subtasks) that were completed are reported here.

2.1 Sampling Activities Completed

No sampling activities were conducted during this reporting period.

2.2 Other Activities Completed

The other activities (subtasks) completed during this reporting period were described in Section 1.0.

3.0 JEOPARDY TASKS (scheduled tasks not completed)

No tasks were in jeopardy as of 23 September 1994.

4.0 OTHER TASKS UNDERWAY (and on schedule)

The tasks that were underway (and on schedule as of 23 September 1994) were described in Section 1.0.

5.0 DATA OBTAINED

Groundwater level data have been obtained but have not yet been peer reviewed. Continuous groundwater level data from the automatic recorders (transducers) were downloaded but have not yet been processed. Phase II sampling data will be reported to the USEPA after validation is completed and the data have been moved in the project data base from QC2 (validated data) to QC3 (final data).

6.0 PROBLEM AREAS

The resolved, new, potential (i.e., anticipated or possible), and outstanding (i.e., still unresolved) problem areas are reported here.

6.1 Resolved Problem Areas

No problem areas remained to be resolved during the reporting period.

6.2 New Problem Areas

No new problem areas remained unresolved during this reporting period.

6.3 Potential Problem Areas

No potential problem areas were identified during this reporting period.

6.4 Outstanding Problem Areas

No problem areas remained unresolved during this reporting period.

7.0 SCHEDULE OF TASKS (next two months)

The projected schedule is provided here. It covers the tasks to be performed in the next two months (October and November 1994), along with other comments or considerations.

Target Date	Task#	Task	Comments/Considerations
ongoing	—	Stabilization	
9/15/95	—	Phase II Investigation	
ongoing	9	Project Management	
ongoing	10	Data Management	
ongoing	11	Project Administration	
ongoing	12	Quality Assurance	
ongoing	13	Health & Safety Assurance	

8.0 CHANGES IN WORK PLAN

No changes were made to the Work Plan during this reporting period.

9.0 OTHER COMMENTS

The plans going forward into October and November include:

- moving forward with stabilization, and
- moving forward with document preparation.

ATTACHMENT A

Application to the City of Cranston for an Industrial Wastewater Discharge Permit

CIBA-GEIGY Facility
Cranston, Rhode Island

Woodward-Clyde
Engineering & sciences applied to the earth & its environment

September 16, 1994
87X4660D, D9

Mr. Alfred Tutela, P.E.
Tutela Engineering Associates, Inc.
P.O. Box 28066
Providence, Rhode Island 02908

Re: Industrial Wastewater Discharge Application
Former CIBA-GEIGY Facility - 180 Mill Street
Cranston, Rhode Island

Dear Mr. Tutela:

Enclosed please find a completed City of Cranston Industrial Wastewater Discharge Application and required EPA National Pretreatment Categorical Standards Form for the above referenced location. As requested during our recent telephone conversation, we have also enclosed the following design drawings for your review:

Drawing No.	Title
G2	Site Plan/General Location Plan
M1A	Process Flow Diagram - Groundwater Pretreatment System
M1B	Process Flow Diagram - Soil Vapor Extraction System
M2	Equipment Layout-Groundwater Pretreatment System,First Floor
M3	Equipment Layout-Groundwater Pretreatment System,Second Floor
M4	Piping Layout- Groundwater Pretreatment System, First Floor
M5	Piping Layout- Groundwater Pretreatment System, Second Floor
M6	Equipment Sections and Details - Sheet 1
M7	Equipment Sections and Details - Sheet 2
M8	Miscellaneous Sections and Details - Sheet 1
M10	Soil Vapor Extraction System - Plan
M11	Soil Vapor Extraction System - Sections and Details - Sheet 1
M12	Soil Vapor Extraction System - Sections and Details - Sheet 2
M13	Soil Vapor Extraction System - Equipment Layout and Details
M14	Soil Vapor Extraction System - Piping Layout and Details
M15	Soil Vapor Extraction System - Tank Details
M16	Soil Vapor Extraction System - Miscellaneous Sections and Details

We look forward to your review of this application and issuance of the Industrial Wastewater Discharge Permit by the City of Cranston. If you have any questions or require additional information, please feel free to call me directly at (201) 812-6831.

jjcorra0/87X4660D/permit.ltr

Wayne Office
P.O. Box 290 • 201 Willowbrook Boulevard • Wayne, New Jersey 07470
201-785-0700 • 212-926-2878 • Fax 201-785-0023

Very truly yours,

WOODWARD-CLYDE CONSULTANTS

Joseph J. Corrado, P.E.
Manager, Process and Design Engineering

c: Ms. Diane Leber - CG, Ardsley
Mr. Barry Berdahl - CG, Toms River
Mr. Mark Houlday - WCC, Boston
Project File

jjcorra0/87X4660D/permit:ltr

CITY OF CRANSTON, RHODE ISLAND

INDUSTRIAL WASTEWATER DISCHARGE APPLICATION

No._____ Plat No. 4 Lot No. 1102

To the City of Cranston, Rhode Island

The undersigned being the Owner (Owner, Lessee, Tenant, etc.) of the property located at 180 Mill Street, Cranston, Rhode Island 02905

does hereby request a permit to install and use (Install, Use) an industrial sewer connection serving CIBA-GEIGY Corporation (Name of Company), which company is engaged in Groundwater Treatment at said location.

The following data is to be completed as applies:

SECTION A - GENERAL INFORMATION

1. Business Name CIBA-GEIGY Corporation Date_____
2. Address of premise discharging wastewater_____
   A. Street 180 Mill Street
      City Cranston
3. Business Address
   A. Street Route 37 West
      City Toms River, New Jersey Zip 08754
   B. Mailing P.O. Box 71
      City Toms River State New Jersey Zip 08754

SECTION A - GENERAL INFORMATION (continued)

4. Executive Officer

A. Name John Mincy B. Title V.P. Environmental Affairs

C. Mailing Address 410 Swing Rd D. City Greensboro State NC Zip 27419-8300

5. Person to be contacted about this Application

A. Name Barry Berdahl B. Title Manager C. Phone 908-914-2715

6. Person to be contacted in case of emergency

A. Name Gene Gessler/Alternate: Jack Tucker B. Title Manager
908-914-2824 609-693-5468

C. Day phone Alternate: 908-914-2747 D. Night phone Alternate: 609-693-5560

SECTION B - BUSINESS DESCRIPTION

1. Business Activity

ACTIVITY Groundwater Treatment SIC(s) 9999

Substances Proposed to be Discharged - Give common and technical names of any materials or product proposed to be discharged to the sewer. Briefly describe the physical and chemical properties of each substance and product.

NAME	DESCRIPTION
Potential for trace amounts of organic and inorganic constituents remaining after treatment	Toluene, xylenes, chlorobenzene, ethylbenzene, iron, manganese

2. Discharge Period - Continuous

(a) Discharge occurs daily: from _____ to _____

(b) Circle the days of the week that the discharge occurs: (S M T W T F S)

3. Variation of Operation. Indicate whether the business activity is: Continuous throughout the year, or Seasonal - Circle the months of the year during which discharge occurs: (J F M A M J J A S O N D)

Comments: Continuous discharge 24 hr/day year round. Discharge may be interrupted for system maintenance.

4. Other Liquid Wastes - List the type and volume of liquid waste removed from the premises by means other than community sewers and disposal site.

DESCRIPTION	VOLUME(gal/mo)	REMOVED BY(name & address)	DISPOSAL SITE
NA			

SECTION C - WATER SOURCE AND USE

1. Water Use and Disposition - Average quantity of water received and wastewater discharged daily.

	SUPPLY FROM			DISCHARGED TO		
WATER USED FOR:	Municipal (gpd)	Other (gpd)	source	Sewer (gpd)	Other (gpd)	discn. to
Sanitary	0 - 100			0 - 100		
Processes						
Boiler						
Cooling						
Washing						
Irrigation						
Product						
Other		130K-260K	Ground water	130K-260K		
TOTAL						

2. Number of Employees

	OFFICE		PRODUCTION					
			SHIFT 1		SHIFT 2		SHIFT 3	
	No.	Hours	No.	Hours	No.	Hours	No.	Hours
WEEKDAY	1 - 2	4 - 8						
SATURDAY	Periodic							
SUNDAY	Periodic							

3. Source of Wastewater Discharged

WATER METER NUMBER	PERCENT DISCHARGED TO SEWER				TOTAL DISCHARGED
	No. 1	No. 2	No. 3	No.4	
13042769	80%				~20K gal/yr
treated groundwater	100%				47-95M gal/yr

SECTION D - WASTEWATER STRENGTH ESTIMATES

1. Elements of Wastewater Strength	Unit	Code	Avg.	Max.
Suspended Solids	Mg/l	TSS	30	100
Total Chemical Oxygen Demand	"	CODT	50	100
Filtered Chem. Oxygen Demand	"	CODF	50	100
Oil and Grease	"	O&GT	0	<10
Chlorine Demand	"	CL2D	2	5
Biochemical Oxygen Demand	"	BOD	25	50
Total Kjeldahl Nitrogen	"	TKN	10	20
Other				

If data from a commercial laboratory was used to determine the values, please give the name and address of the laboratory. Based on anticipated influent concentrations and estimated removal efficiencies.

Name_____ Address_____

2. Wastewater Flow Rate- Rates based on system design flow.

Peak Hourly (gpm)	Max. Daily (gpd)	Ann. Daily Avg. (gpd)	Seasonal Avg. Seasonal Min.	Daily(gpd) Seasonal Max.
A. 180	B. 259,200	C. 130,000-250,000	D.	E.

3. If Batch Discharge, Indicate:

a. Number of batch discharges:_____per month

b. Time of batch discharges:_____,at_____,_____,_____.

c. Average quantity per batch:_____gallons

d. Flow Rate:_____gallons/minute.

4. Wastewater Constituents - Indicate if any of the following constituents, characteristics or substances is or can be present (X) in your wastewater discharge as a result of your operations.

CODE	CONSTITUENTS		CODE	CONSTITUENTS		CODE	CONSTITUENTS	
ALGC	Algicides*		FORMA	Formaldehyde		RAD	Radioactivity*	
AL	Aluminum		HC	Hydrocarbons*	X	SE	Selenium	X
NH3N	Ammonia		I-	Iodide		AG	Silver	
SB	Antimony		FE	Iron	X	NA	Sodium	X
AS	Arsenic	X	PB	Lead		SOLV	Solvents*	X
BA	Barium	X	MG	Magnesium	X	SO4=	Sulfate	X
BE	Beryllium		MN	Manganese	X	S=T	Sulfide	X
B	Boron		HG	Mercury		SO3=	Sulfite	
BR-	Bromide		MO	Molybdenum		MBAS	Surfactants	
CD	Cadmium		NI	Nickel		TEMP	Temperature Increase(+)	
CA	Calcium	X	O&GM	Oil & Grease (Min. Orig.)		TEMP	Temperature Decrease(-)	
CL2	Chlorine		O&GT	Oil & Grease (Total)	X	TI	Titanium	
CL-	Chloride	X	PESTC	Pesticides*		SN	Tin	
CR	Chromium		PH	pH Increase(+)		V	Vanadium	
CO	Cobalt		PH	pH Decrease(-)		TVA	Volatile Acids	
CU	Copper		PHENL	Phenols	X	ZN	Zinc	X
CN-	Cyanide		P	Phosphorus	X			
F-	Fluoride		K	Potassium	X			

* Identify the Chemical Compounds or Elements

Toluene, xylenes, chlorobenzene, ethylbenzene

Comments: The constituents listed above have been detected in groundwater samples at varied concentrations. The pretreatment system has been designed to remove organic and inorganic compounds. However, trace amounts of these compounds may be present in the final effluent.

SECTION E - WASTEWATER TREATMENT

1. Pollution Abatement Practices

a. Wastewater Pretreatment - Check the type of treatment, if any, given wastewater from this building sewer before it is discharged to the public sewer:

__none, X holding tank, __grease trap, __oil and water separator, __grinding, X sedimentation, X pH adjustment, __biological treatment, __screening, __chlorination, or X other.

Description.

Describe the loading rates, design capacity, physical size, etc. of each pretreatment facility checked above.

	Labor Rates	Design Capacity	Physical Size
Equalization (two tanks)	160 gpm/20 gpm	50,000/12,000	21' dia. x 21'/12' dia. x
Air oxidation/pH adjustment	90-180 gpm	260 gpm	14 ft diameter x 6 ft
Sedimentation	90-180 gpm	250 gpm	640 ft^2 settling area
Filtration	90-180 gpm	220 gpm	38 ft^2 filter area
Air stripping	90-180 gpm	90-180 gpm	24" dia. x 24'
pH adjustment	90-180 gpm	260 gpm	8' dia x 9'
Aqueous activated carbon	90-180 gpm	350 gpm	(2 units) 10K lbs. each
Vapor phase activated carbon	1000-2000 SCFM	10,000 SCFM	(2 units 12.5K lbs. each

SECTION F - SUPPLEMENTAL DATA

1. A plan of the property showing accurately all sewers and drains now existing is attached hereunto as Exhibit "A".

2. Plans and specifications covering any work proposed to be performed under this permit is attached hereunto as Exhibit "B".

3. The name and address of the person or firm who will perform the work covered by this permit is CIBA-GEIGY Corporation
444 Sawmill River Road
Ardsley, NY 10502-2699

4. Additional pertinent data:
All hydraulic loading data included in this application is based on the maximum design capacity of 180 gpm. Actual discharge rates may vary between 90 gpm and 180 gpm based on field conditions at start-up.

SECTION G - PERMIT CONDITIONS

In consideration of the granting of this permit the undersigned agrees:

1. To furnish any additional information relating to the installation or use of the industrial sewer for which this permit is sought as may be requested by the Director.

2. To accept and abide by all provisions of pertinent existing ordinances or regulations of the City of Cranston, Rhode Island and of all other pertinent ordinances or regulations that may be adopted in the future.

3. To operate and maintain any waste pretreatment facilities, as may be required as a condition of the acceptance into the public sewer of the industrial wastes involved, in an efficient manner at all times, and at no expense to the City.

4. To notify the Director when the building sewer is ready for inspection and connection to the public sewer, but before any portion of the work is backfilled.

5. To cooperate at all times with the Director and his representatives in their inspecting, sampling, and study of the industrial wastes, and any facilities provided for pretreatment.

6. To notify the Director immediately in the event of any accident, negligence, or other occurrence that occasions discharge to the public sewers of any wastes or process waters not covered by this permit.

7. To notify the Director regarding any changes (permanent or temporary) to the premise or operations that significantly change the quality of volume of the wastewater discharge or deviate from the terms and conditions under which this Permit is granted.

SECTION H - CERTIFICATION: I certify that the information above and on the following parts is true and correct to the best of my knowledge.

Signature of Applicant _____ Date 9/13/94

Barry Berdahl _____ Manager

Print Name _____ Title

Date Application filed with Director of Public Works _____

by _____
(Initials)

Application approved and Wastewater Discharge Permit issued:

Date _____ Signed _____
Director

Building Permit Issued and Fee Paid:

Date _____ Signed _____
Building Inspector

NOTE: The following must be provided:
Building Layout Sheet
Schematic Flow Diagram

Please provide the most recent analysis of your wastewater discharge(s) with this application.

CITY OF CRANSTON, RHODE ISLAND

BUILDING LAYOUT SHEET

Purpose - The Building Layout shows the wastewater generating operations which contribute to each building sewer. This building layout will also enable the City and the applicant to select suitable sampling locations for determining and verifying wastewater strength.	PERMIT NUMBER _____

Building Layout-Draw to scale the location of each building on the premises. Show location of all water meters, storm drains, numbered unit processes, public sewers and each building sewer connected to the public sewers. Number each building sewer and show possible sampling locations. Use additional sheets, if necessary.

CITY OF CRANSTON, RHODE ISLAND

SCHEMATIC FLOW DIAGRAM

Purpose - The Schematic Flow Diagram shows the flow pattern of products through the facility and the various sources of wastewater. This information will enable the City to assess the quality, volume and peak flows of the discharge.

PERMIT NUMBER _____

Schematic Flow Diagram - For each major activity in which wastewater is generated, draw a diagram of the flow of materials and water from start to completed product, showing all unit processes generating wastewater. Number each unit process having discharges to the community sewer. Use these numbers when showing this unit process in the building layout.

EPA NATIONAL PRETREATMENT CATEGORICAL STANDARDS FORM

(Must be filled out and returned with Wastewater Discharge Application)

CIBA-GEIGY Corporation — Company Name

9999 — SIC No.(s)

Barry Berdahl — Person filling out form

Manager — Title

CIBA-GEIGY Corporation — Company Name

is not — (is, is not) subject to EPA National Pretreatment Categorical Standards.

If Categorical Standards apply, fill out Sections (A),(B) and (D).

If Categorical Standards do not apply, fill out Section (C) and Section (D).

SECTION (A).

Indicate applicable EPA Categorical Standard(s): _____

_____

I hereby certify that _____ (Company Name) _____ (is, is not)

currently meeting all applicable EPA National Pretreatment Categorical Standards specific to said company's industrial subcategory(s). List the nature and concentration of all pollutants in the effluent which are limited.

_____

_____

_____

_____

_____

_____

_____

_____

If Categorical Standards are not being met, _____ (Company Name) will be in compliance by _____ (Date). List the nature and concentration of all pollutants currently not in compliance.

List reasons why said company cannot meet Categorical Standards.

If said company is initiating pretreatment process(es) in order to comply with Categorical Standards, list each process, include description and time of completion.

SECTION (B).

Has a Baseline Monitoring Report (BMR) ever been submitted pursuant to Title 40, Section 403.12 of the Code of Federal Regulations or pursuant to Rule 14 of the Rhode Island Pretreatment Regulations.

_____ _____
Yes/No Date of submission and to whom

If Yes, please send us a copy of the report.

If No, is a BMR being prepared. _____
Yes/No

When will it be completed. _____
Date

SECTION (C)

If Categorical Standards do not apply, are any currently being promulgated. No
(Yes/No)

If yes, they will become effective on _____.
Date

If said company is initiating pretreatment process(es), list each process, include desciption and time of completion.

Groundwater pretreatment processes will include: equalization, air oxidation, pH adjustment, sedimentation, filtration, air stripping, aqueous and vapor phase activated carbon adsorbtion, and pH adjustment. The estimated completion date for this system is September/October, 1995.

SECTION (D). CERTIFICATION

Facts contained herein are true on the basis of my personal knowledge or to the best of my information and belief.

[signature] 9/13/94
Signature Date

Manager
Title